

Remarks

Currently pending in the application are claims 40-54 and 56-72. Claims 40, 51, 68 and 72 have been amended to further define Applicants invention. Support for the amendments can be found at, for example, paragraphs [0043], [0071], [0122] and Figure 1B of the present application. No new matter has been added. In view of the above amendments and following remarks, applicants respectfully request reconsideration by the Examiner, and advancement of the application to allowance.

35 U.S.C. § 103(a)

The Examiner rejected claims 40-72 under 35 U.S.C. § 103(a) as being unpatentable over Smith (2003/0038327) in view of Bishop et al. (US 6,400,009). Applicants traverse this rejection for the following reasons.

Claims 48 and 68, as amended, are directed to an optical MEMS device and a method of manufacturing the optical MEMS device, the optical MEMS including at least one optically transmissive layer, at least one intermediate layer structure, at least one device layer, and a base layer wherein the intermediate layer structure facilitates one or more optical paths between the optically transmissive layer and base layer and wherein the intermediate structure layer defines a distance (d) between the optically transmissive layer and the device layer within a range of 10-1000 micrometers and wherein the optical paths for guiding light through the base layer are partly defined by a plurality of holes in a masking deposited on the base layer.

In comparison, Smith's teachings are directed to improving hermetically sealed MEMS devices by placing wire bond pads and a window aperture (which provides access

for bonding electrical wire connections to the wire bond pads) external to the hermetic seal to prevent particulate contamination from entering the MEMS device during handling, testing or wire bonding operations while Bishop et al. generally teaches the use of firewalls to hermetically seal a MEMS device. Neither Smith nor Bishop et al. disclose or suggest that such MEMS devices could be used for optical applications or that such MEMS devices could contain a plurality of holes in a masking deposited on the base layer.

As noted in the present application, the various optical components of an optical MEMS device must be arranged in well-defined positions in order to achieve desired optical transmission. Thus, one skilled in the art, when reading the teachings of Smith and Bishop et al. as a whole, would expect the MEMS devices taught in these publications to produce large misalignment errors when used in optical applications. Furthermore, Smith and Bishop et al.'s MEMS devices would have to be arranged one beside another in order to have different optical paths, thus producing an array of a large number of MEMS devices of large dimension. In contrast, a plurality of optical paths is achieved in a single optical MEMS device in the presently claimed invention by defining a plurality of holes in a masking deposited on the base layer of the optical MEMS device itself. The presently claimed optical MEMS device is thus small in size, yet able to provide high optical transmission. This is neither taught nor suggested in Smith or Bishop et al.

Based on the above amendments and remarks, Applicants respectfully submit claims 48 and 68 are not obvious in view of the publications cited above. Thus, since claims 48 and 68 are not obvious, all claims depending on claims 48 and 68 are also not

obvious. Accordingly, Applicants respectfully request the rejections under 35 U.S.C. § 103(a) be withdrawn.

Conclusion

It is respectfully submitted that the pending claims are patentable and are in a condition for allowance. Applicants respectfully request all pending claims be allowed and that the application pass to issuance. Should any fee be due in connection with the filing of this document, the Commissioner for Patents is hereby authorized to deduct said fee from Huntsman Corporation Deposit Account No. 08-3442.

Respectfully Submitted,

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Date: 9/23/08